

Amendments to the claims

Claim 1 (original) A pool cue tip conditioning device comprising:

    a housing having an upper end limiting upward movement of components contained therein, a lower end having defined therein an opening enabling insertion of a pool cue into the device and a body portion disposed between said ends:

    a striker plate slidably disposed above said lower end, said plate comprising a base member extending across said housing, a multiplicity of tip-indenting fingers arranged in a concave array connected to a lower side of said base member and a contact member located at a central location on a top side of said base member;

    a plunger slidably disposed above said striker plate, said plunger comprising a disk having a bottom surface in position for being contacted by said contact member and said plunger having connected to a topside thereof a post including a lower part and a tip;

    a plug located above said plunger, said plug having defined in a central location of a bottom surface thereof an aperture conforming to said tip of said plunger whereby said tip may be moved to fit into said aperture upon being centered;

    a return spring disposed around a periphery of said post, said return spring including non-parallel turns biasing said post off-center whereby said tip of said plunger remains in contact with a bottom surface of said plug in the

absence of pressure applied to said striker plate; and

a work spring urging said plug downward.

2. (original) The device as defined in claim 1 wherein said contact member on a top side of said striker plate comprises a rounded knob.

3. (currently amended) The device as defined in claim 1 wherein relative strength of said work spring asserts a stronger force than said return spring.

4. (currently amended) The device as defined in claim 3 wherein said work spring is comprised of 0.050 inch music wire.

5. (currently amended) The device as defined in claim 4 wherein said return spring is comprised of 0.032 inch music wire.

6. (original) The device as defined in claim 3 wherein said return spring has a generally triangular shape.

7. (original) The device as defined in claim 6 wherein said return spring has an upper end and a lower end and said lower end is bent away from parallel alignment with said upper end to an extent of 15 to 20 degrees.

8. (original) The device as defined in claim 1 wherein said fingers are pyramidal in shape and have a height of 0.700 inch.

9. (currently amended) The device as defined in claim 1 wherein said fingers are located on 0.050 inch centers.

10. (original) The device as defined in claim 1 including a lower stop collar limiting upward movement of said plunger and an upper stop collar limiting downward movement of said plug.

Amendments to the specification

Replacement paragraph beginning at page 1, line 12

Various approaches to conditioning of pool cue tips have been taken, most of which involve some form of cutting, scuffing or piercing the tip leather ~~and~~ and thus shortening its useful lifetime. In addition to this disadvantage, considerable skill is required to apply a tool with an exact and consistent amount of force so as to obtain a playable surface without damaging the leather. It would be preferable to provide a device that creates impressions capable of receiving chalk in the tip surface without inflicting damage.

Replacement paragraph beginning at page 1, line, 19

The present invention is directed to a pool cue tip conditioning device comprising a series of components aligned in a generally tubular housing adapted for use in a vertical configuration, with the lower end of the device being pulled downward over a pool cue tip. A striker plate is slidably mounted adjacent the lower end of the housing, the plate on its lower side supporting an array of tip-indenting members and on its upper side having a contact knob for receiving blows from a plunger. The plunger, slidably mounted above the plate, has a flat bottom surface engaging the knob and an upper surface upon which a vertically extending post is mounted. The post is configured to engage a return spring which has a characteristic of causing the tip end of the post to be centered when pressure is applied by forcing the housing downward over a

pool cue tip. A plug is provided between a work spring secured by an upper end of the housing and the upper end of the return spring, the plug at its bottom surface having an axially extending central aperture into which the upper end of the post is directed by action of the return spring upon application of pressure, which action results from structural features of the return spring. In particular, the return spring may comprise a generally triangular shaped compression spring having an off-axis bend at its smaller end and upper and lower turns of the spring substantially out of parallel with each other. When pressure is not being applied to the return spring, the plunger tip rests against a lower surface of the plug away from the central aperture, restraining the striker plate from movement.

Replacement paragraph beginning at page 4, line 14

Referring to Fig. 1 of the drawings, there is shown an external view of a pool cue tip conditioning device 10. The device has a bottom housing portion 12, a main body housing portion 27 and a housing cap 66. The main body portion includes a middle portion 26 and a lower sleeve portion 20. Bottom ~~housing~~ housing portion 12 has an end flange 16 and a central opening 18 in which pool cue tips are received for treatment. An array of projecting fingers 32 are provided to come into contact with pool cue tips in a tapping treatment.

Replacement paragraph beginning at page 4, line 21

Fig. 2 shows housing parts 12, 27 and 66 positioned at bottom, middle and top positions and internal components in vertical alignment, including a striker plate 14 carried in housing portion 12, a plunger 36 located in position

to come into contact with striker plate 14, a return spring 46 disposed over post 36 40 of the plunger, a plug 54 adapted to receive a tip 44 of the plunger in an aperture 62 at the bottom surface 60 of the the plug upon application of force to striker plate 14 and a work spring 58 urging the plug downward.

Replacement paragraph beginning at page 6, line 1

Fig. 4 also shows connection of main body portion 27 of the housing with cap 66 at the top and with bottom housing portion 12. At the top, external threads 68 of inner member 69 are engaged with internal threads 70 of cap 66, while at the bottom external threads 24 of bottom housing 12 are engaged with internal threads 51 of middle housing portion 26.

Replacement paragraph beginning at page 6, line 6

In the configuration of Fig. 4 striker plate 14 remains in contact with flange 16 at the base of bottom housing portion 12, inasmuch as the striker has not yet been driven upward by insertion of a cue tip into central opening 18 or by making contact with fingers 32. Knob 34 of the striker allows plunger 36 to be tilted over, with flat disk 38 inclined away from parallel with the striker plate. Return spring 46, in the absence of pressure from below, has its upper end 74 and its lower end 72 tilted away from perpendicular alignment with housing components of the device. Fig. 4 also shows stop collars incorporated in the main housing body 27 to limit movement of operating components. Stop collar 52 limits downward movement of plug 54, and stop collar 53 limits upward movement of plunger 36. Lower surface 60 of plug 54 also restrains plunger tip 44 from upward movement until the plunger tip is

centered and allowed to move into aperture 62 of the plug.

Replacement paragraph beginning at page 7, line 17

Fig. 7 shows details of a suitable return spring for use in the preferred embodiment. Although the invention is not limited to specific dimensions of components, the return spring 46, which is a generally triangular compression spring with a bent-off axis at its smaller end, may have a diameter 75 at its upper end 74 of 0.625 inch and at its lower end 72 a diameter of 0.350 inch. Overall expanded length as shown is 1.10 inch. At its lower end the spring is bent away from being parallel with the upper end to the extent of 15 to 20 degrees. The return spring preferably is comprised of a 0.032 inch music wire and may have 7 to 9 turns in the coil. When pressure is not being applied to this spring at its lower end in which the plunger tip is inserted, the spring holds the plunger tip away from the aperture of the plug. Upon compression of the return spring by force applied to its lower and smaller end the spring and plunger become aligned symmetrically and are centered, allowing the plunger to move freely into the aperture of the plug.

Replacement paragraph beginning at page 8, line 17

Fig. 10 and Fig. 13 show two versions of plungers which may be used. Each of these plungers (out of scale with other components) ~~has~~ have a cylindrical upper tip portion 44 sized to fit into aperture 62 of the plug and a circular flat bottom disk 38, 82 sized to fit within lower housing portion 12. Lower post portion 36, 80 receives the lower end portion of the return spring, the lower post portion 36, 80 being cylindrical as in the plunger of Fig. 10 or

frustro-conical as in Fig. 13. Each of the plungers ~~has~~ have a transition zone 42 between upper and lower portions of the post.

Replacement paragraph beginning at page 9, line 6

As shown in the enlarged view of Fig. 12 the striker plate 14, which fits across the interior of bottom housing portion 12, has a metal disk 28 with a concave pocket at its lower side and an arcuate knob on its topside. An array ~~30~~ 32 of fingers 32 are disposed within the pocket and are arranged to have their points form a concave pattern conforming to the rounded shape of a pool cue tip. The metal disk 28 may have a thickness of 0.200 inch, and the rounded knob 34 may have a thickness of 0.150 inch at its center and a diameter of 0.400 inch. Fingers 32 are preferably pyramidal in shape, having a height of 0.040 inch, and are located on 0.050 inch centers. Points of the fingers may have an angle of 40 degrees with relation to horizontal. Curvature at a radius of 0.390 inch provides a suitable rounded shape for the pocket.

Replacement paragraph beginning at page 10, line 3

For the embodiment described above the work spring may comprise a compression spring made of 0.050 inch music wire having an expanded length of 2 1/4 inches. The housing is preferably made of polycarbonate formed by injection molding. The striker plate may be made of an aluminum alloy such as 7075 or harder alloy fabricated by computer-aided machining.